REMARKS

The Non-Final Office Action mailed December 10, 2009, considered claims 1–2, 4–6, 8, 18–20, 22–23, 33–37, 47, 49 and 53–85. Claims 1, 2, 4–6, 8, 18–20, 22, 23–33, 35, 37, 47, and 54–85 have been allowed. Claims 36, 49 and 53 have been rejected. Claims 36 and 49 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jasper et al., U.S. Patent No. 5,519,370 (filed Oct. 28, 1991) (hereinafter Jasper). Claim 53 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Abeta, U.S. Patent No. 6,647,003 (filed Jul. 20, 1999) (hereinafter Abeta) in view of Jasper.[1]

By this response, claims 18, 36, and 49 are amended. Claims 1–2, 4–6, 8, 18–20, 22–23, 33–37, 47, 49 and 53–85 remain pending. Claims 18, 36, 49 and 53 are independent claims which remain at issue.[2] Support for the amendments to claims 18 and 49 may be found, *inter alia*, within Specification pp. 75–79 ("Second Embodiment") and Fig's 16 & 18–21.[3] Support for the amendment to claim 36 may be found, *inter alia*, within Specification p. 82 l. 2–4 and Fig's 21 & 25.[4]

Claims 36 and 49 Rejected Under 35 U.S.C. § 103(a) in view of Jasper:

Independent claims 36 and 49 were rejected under 35 U.S.C. § 103(a) as being unpatentable in view of Jasper.[5] Each of claims 36 and 49 have now been amended[6] and the Applicants submit that Jasper fails to teach or suggest all the limitations of claims 36 and 49.

In particular, as to claim 36, Jasper fails to teach or suggest dividing the data symbols of said data channel into a plurality of data symbol sections each of which includes a plurality of data symbols, selecting pilot symbols appropriate for calculating the channel estimation value of

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[1] *See* Office Communication (paper no. 20091102, mailed Dec. 10, 2009). The prior art status of Abeta is being challenged. Additionally, applicant reserves the right to challenge the prior art status of any other cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

[2] Claim 18, which has already been allowed, is amended by this response. However, since the amendment adds an additional limitation to an already allowed claim, claim 18 should remain in condition for allowance.

[3] It should be noted that the claims as recited take support from the entire Specification. As such, no particular part of the Specification should be considered separately from the entirety of the Specification.

[4] It should be noted that the claims as recited take support from the entire Specification. As such, no particular part of the Specification should be considered separately from the entirety of the Specification.

[5] Office Communication p. 2 (paper no. 20091102, mailed Dec. 10, 2009).

[6] Please note that independent claim 18 has also been amended to include the limitation now added to claims 36 and 49. However, since the amendment adds an additional limitation to an already allowed claim, claim 18 should remain in condition for allowance.

the data symbols in each of the data symbol sections, and generating weighting factors to be used for weighting and averaging the pilot symbols.

As to claim 49, Jasper fails to teach or suggest dividing data symbols in a slot of said channel into a plurality of data symbol sections each of which includes a plurality of data symbols, selecting pilot symbols appropriate for acquiring the channel estimation value of the data symbols in each of the data symbol sections, and generating weighting factors which are to be used for weighting and averaging the pilot symbols and which vary from data symbol section to data symbol section in a slot.

Jasper discloses, in Fig. 4H, a method for calculating a channel estimation value of each data symbol by dividing the data symbols into a plurality of data symbol sections, *each of which includes one data symbol*, and selecting pilot symbols for calculating the channel estimation value of each of the data symbols, and weighting and averaging said pilot symbols using weighting factors and calculating the channel estimation value of each of the data symbols.[7] Jasper does not disclose that each of the data symbol sections includes a plurality of data symbols.[8] According to Jasper, calculating a channel estimation value of one data symbol section only provides a channel estimation value of one data symbol.[9]

In contrast, according to the subject matter of claim 36, since each of a plurality of data symbol sections includes a plurality of data symbols, calculating a channel estimation value of one data symbol section provides a channel estimation value of a plurality of data symbols which belong to the data symbol section. Therefore, it is possible to reduce the burden or processing load at the receiving side as compared to Jasper. Both the technical feature and the beneficial effect are not obvious from Jasper or other prior art documents.

As explained above, claim 36 is not obvious from Jasper or other prior art documents. The limitation added to claim 36 has also been added to claims 18 and 49 and, correspondingly, the above discussion applies also to claims 18 and 49. Accordingly, because of at least the distinctions noted, *inter alia*, a rejection of claims 36 and 49 under 35 U.S.C. § 103(a) as being

[7] *See* Jasper Fig. 4H and accompanying text; *see also, generally*, Jasper.
[8] *See, generally*, Jasper.
[9] *See, generally*, Jasper.

unpatentable in view of Jasper would be improper and should be withdrawn. Accordingly, the Applicants respectfully request favorable reconsideration of claims18, 36 and 49.[10]

Rejection of Claim 53 Under 35 U.S.C. § 103(a) in view of Abeta:

Independent claim 53 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Abeta in view of Jasper.[11] The applicants respectfully submit that Abeta does not qualify as prior art and, therefore, the rejection of claim 53 should be withdrawn.

For a reference to be used as prior art under 35 U.S.C. § 103, it must first qualify as prior art under the provisions of 35 U.S.C. § 102. The most salient provisions of 35 U.S.C. § 102 with respect to Abeta are 35 U.S.C. § 102(a), (b), and (e).

With respect to 35 U.S.C. § 102(a) and (b), Abeta did not issue until November 11, 2003, whereas the present patent application was filed on December 01, 2000. Accordingly, Abeta fails to qualify as prior art under either 35 U.S.C. § 102(a) and (b).

Accordingly, the only remaining possible provision of 35 U.S.C. § 102 under which the present application might otherwise qualify as prior art is 35 U.S.C. § 102(e). However, it is not necessary to evaluate Abeta to see if it qualifies as a 35 U.S.C. § 102(e) reference. Under the provisions of 35 U.S.C. § 103(c), a statement of common ownership has already been provided by Adrian J. Lee in "Amendment D," filed Oct. 13, 2006.[12]

The Applicants do note, however, that the Abeta patent has some related publications in its chain of priority. For instance, PCT patent application publication number WO99/27672, published June 3, 1999 (hereinafter, the "PCT Abeta reference"), and European patent application publication number EP0955741, published November 10, 1999 (hereinafter, the "EP Abeta reference"). However, these references also do not qualify as prior art with respect to Claim 53 for the reasons that follow.

35 U.S.C. § 102(b) indicates that a reference qualifies as prior art if its publication date is more than one year prior to the "effective filing date" of the present application. For § 102(b) purposes, the effective filing date of the present application will be the PCT patent application date, March 30, 2000. Since the publication dates of the PCT Abeta reference (June 9, 1999) and

[10] As noted *supra*, since the amendment to claim 18 adds an additional limitation to an already allowed claim, claim 18 should remain in condition for allowance.

[11] Office Comm. p. 3.

[12] *See* "Amendment D" p. 35 (filed Oct. 13, 2006).

the EP Abeta reference (November 10, 1999) are not prior to one year before this date (i.e., before March 30, 1999), neither the PCT Abeta reference nor the EP Abeta reference would qualify as prior art under 35 U.S.C. § 102(b).

As for 35 U.S.C. § 102(a), a printed publication may qualify as prior art if it was published prior to the "date of invention" of the present application. The "date of invention" is presumed to be the date the U.S. patent application was filed, but that date may be moved earlier to show an earlier date of invention. The present application claims priority to Japanese patent application serial number 11-96804 filed on April 2, 1999. An English translation of this document has been included in the Information Disclosure Statement (IDS) which was filed Oct. 13, 2006. At least Claims 53–84 are supported by the Japanese priority document. Accordingly, the date of invention for Claims 53–84 is moved to April 2, 1999, thereby predating the publication of the PCT Abeta reference and the EP Abeta reference. Accordingly, the PCT Abeta reference and the EP Abeta reference do not qualify as prior art under 35 U.S.C. § 102(a).

As for 35 U.S.C. § 102(e), the EP Abeta reference cannot qualify since it is not a United States patent publication. The PCT Abeta reference might be considered to be a United States patent publication provided that certain facts can be established. However, the PCT Abeta reference would be disqualified as prior art under the provisions of 35 U.S.C. § 103(c) because it was commonly owned by NTT DoCoMo, Inc. at the time of the invention of the present patent application.

Therefore, the PCT Abeta and EP Abeta references would not qualify as prior art with respect to Claims 53-84.

Because Abeta does not qualify as prior art, the rejection of claim 53 under 35 U.S.C. § 103(a) which relies (at least in part) upon Abeta should therefore be withdrawn. Accordingly, the Applicants respectfully request withdrawal of the rejection and, as there are no other rejections, the prompt allowance of claim 53 as recited.

In view of the foregoing, Applicant respectfully submits that any other rejections to the claims are now moot and do not, therefore, need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicant acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice. Instead, Applicant reserves the right to challenge any

of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicant specifically requests that the Examiner provide references supporting the teachings officially noticed, as well as the required motivation or suggestion to combine the relied upon notice with the other art of record.

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; and/or (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefore and charge any additional fees that may be required to Deposit Account No. 23-3178.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at (801) 533-9800.

Dated this 10th day of March, 2010.

Respectfully submitted,

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